(Model.)

C. KENNER.

DOUBLE SHOVEL PLOW.

No. 270,812. Patented Jan. 16, 1883.

Fig: 1.

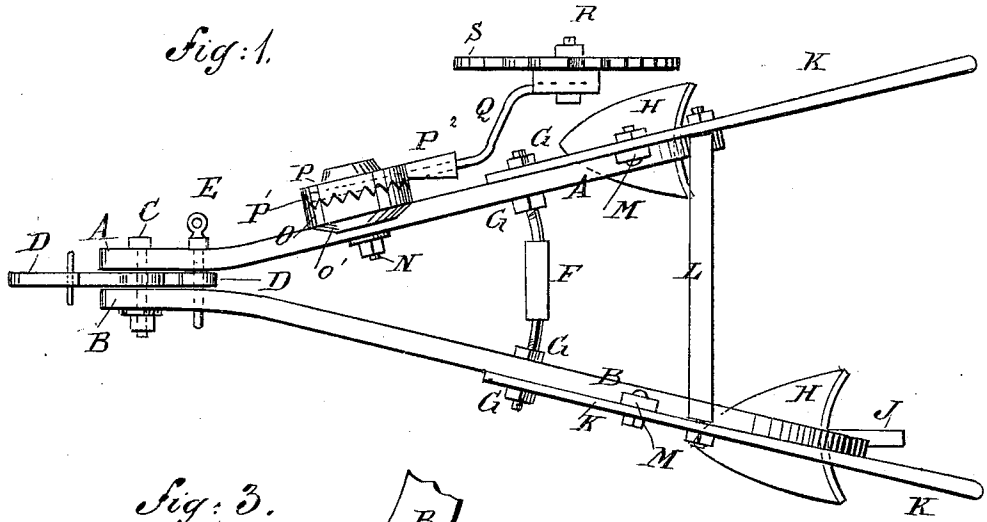


Fig: 3.

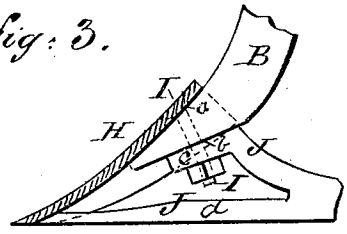


Fig: 2.

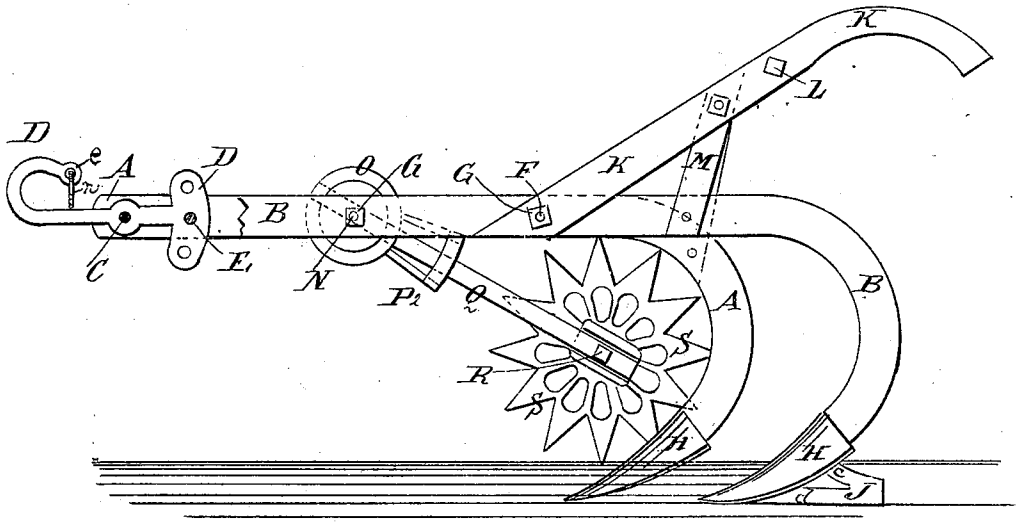
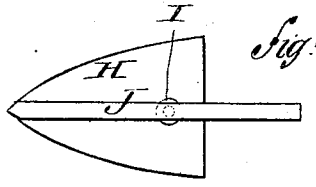


Fig: 4.



WITNESSES:

Chas. Nida.

C. Sedgwick

INVENTOR:

C. Kenner

BY Munn & Co.

ATTORNEYS.

N. Peters. Photo-Lithographer, Washington, D.C.

UNITED STATES PATENT OFFICE.

CHARLES KENNER, OF ST. MARY'S, MISSOURI.

DOUBLE-SHOVEL PLOW.

SPECIFICATION forming part of Letters Patent No. 270,812, dated January 16, 1883.

Application filed September 20, 1882. (Model.)

To all whom it may concern:

Be it known that I, CHARLES KENNER, of St. Mary's, in the county of St. Genevieve and State of Missouri, have invented certain new and useful Improvements in Double-Shovel Plows, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of my improvement. Fig. 2 is a side elevation of the same, part being broken away to show the construction. Fig. 3 is a side elevation of the lower part of a plow-standard and its shoe, the shovel being shown in section. Fig. 4 is a bottom view of a shoe and shovel.

My invention relates to improvements in double-shovel plows; and it consists in the peculiar construction and arrangement of the parts, as hereinafter more fully set forth, and pointed out in the claim.

A B represent the plow-beams, the forward ends of which are secured to each other by the bolt C, which passes through them and through the clevis or draw-hook D, interposed between them. The rear end of the clevis D projects in the rear of the bolt C, and has a curved cross-head formed upon it, which is perforated with a number of holes to receive the rear clevis pin or bolt, E, so that the point of draft attachment can be raised and lowered to cause the plows to work deeper or shallower in the ground by moving the said pin E from one to another of the said holes. The front end of the clevis D is curved around to the rear to receive the draft-ring, and is provided at its end with a hole, *e*, for the reception of a ring, *n*, of greater diameter than the distance between the hole *e* and the forward ends of the plow-beams A B, so that when the draft-ring has been inserted in the curved forward end of the clevis D and the draft applied the ring *n* will fall by gravity into a vertical position behind the draft-ring (not shown in the drawings) and prevent the latter from becoming disengaged from the clevis-hook. The plow-beams A B, at or near the rear end of the clevis D, are bent outward, so as to incline from each other, and are connected by a tie-rod, F, the ends of which pass through holes in the said beams, and have screw-threads formed upon them to receive the nuts G, placed one upon each side of each beam, so that the rear parts of the plow-beams A B can be adjusted closer together or farther apart, as may be desired. The plow-beams A B are made of different lengths, and their rear ends are bent downward and forward to adapt them to serve as standards to receive the shovels H, the curvature of the said beams being such that the said shovels will stand at an angle of about forty-five degrees (45°) with the ground. The shovels H are secured in place by bolts I, which pass through them, through holes *a* in the lower ends of the plow-beams A B, and through holes *b* in the ends of the upper bars, *c*, of the shoes J, as shown in Figs. 2, 3. The double-shovel shoe J is made of one piece or bar of metal, having its lower arm, *d*, horizontal, and bent in an upwardly-inclined direction at its rear end, as shown, to form the upper bar, *c*, lying over the horizontal part *d*, with a space between them, and in the same vertical plane therewith; and said upper bar, *c*, is provided with the hole *b* near its end. By this construction the shoe is rendered lighter, and requires less metal than if made of a continuous plate of metal, and therefore cheaper. The ends of the upper bars, *c*, of the shoes J are so formed as to fit snugly against the lower side of the lower ends of the plow-beams A B. The lower arms, *d*, of the shoes J are horizontal, and have their lower edges upon a level, or nearly so, with the points of the shovels H. The forward ends of the lower bars of the shoes J are welded or otherwise firmly secured to the points of the shovels H.

K are the handles, the lower ends of which are secured to the beams A B by the tie-rod F and its nuts G, or by separate bolts, as may be desired. The handles K are connected and held at the proper distance apart by a round or cross-bar, L, attached to them, and are supported at the desired height by uprights M, the upper ends of which are bolted or otherwise secured to the said handles, and their lower ends are bolted or otherwise secured to the beams A B.

To the outer side of the plow-beam A, adjacent to the row of plants being cultivated, is secured by a bolt, N, the clutch O P, the parts of which have radial teeth upon their adjacent faces to prevent the said parts from turning upon each other. In the outer side or back of the inner part, O, of the clutch is formed a cross-groove, O′, to receive and fit upon the plow-beam A to prevent the clutch from turning upon the said beam. In the face of the outer part, P, of the clutch is formed a cross-groove, P′, to receive the bar Q, through which, at a little distance from its forward side, the bolt N passes. The bar Q passes through a socket-arm, P^2, formed upon the outer part, P, of the clutch, and projecting downward and rearward to serve as a guide and support to the bar Q, and as a stop to limit the movement of the said bar Q. The interior of the socket-arm P^2 is wider vertically than the breadth of the bar Q to allow the said bar to have a vertical play.

To the rear end of the bar Q is attached, or upon it is formed, a journal, R, to receive the rotating fender S, the edge of which is serrated, and which has numerous openings formed through its body, as shown in Fig. 2, so that the said fender will be rotated by contact with the ground, and will allow nothing but fine soil to pass to and around the plants. With this construction the fender can be readily adjusted to correspond with the depth at which the shovels enter the ground, and can rise to pass over obstructions.

I am aware that a mold-board and a right-angled triangle having its plane vertical and carrying on its lower edge a removable shoe have heretofore been secured to the standard of a curved plow-beam, and I therefore lay no claim to the combination of a shovel, right-angled triangle, and shoe, my invention being confined to the construction of parts pointed out in the claim, in which I dispense with the right-angled triangle of the construction disclaimed and secure the shoe directly to the double shovel by a single bolt, and by welding the front end of the bar-shoe to the point of the shovel, thus rendering the construction different, simpler, cheaper, and lighter.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

In a shovel-plow, the combination, with the plow-beam A, curved at its rear end, and provided with the hole *a* near its end, and shovel H, having a hole near its upper end, of the shoe J, made of a single bar of metal, having its lower arm, *d*, horizontal, and secured at its front end to the point of the shovel, and bent around at its rear end to form the upper inclined bar, *c*, provided with a hole, *b*, near its end, and a single bolt, I, securing together the shovel, curved plow-beam, and upper bar of the shoe, substantially as described.

CHARLES KENNER.

Witnesses:
JOSEPH MUTHER,
FRANCIS VOELKER.